

Title: SEMICONDUCTOR MATERIAL HANDLING SYSTEM
Docket No.: ASYS08197US0 Inventor(s): Anthony C. Bonora
Serial No.: Unknown Attorney: Scott D. Sanford
Confirm No: Unknown Phone: (415) 362-3800
Filed: Herewith Express Mail No.: EL670726215US

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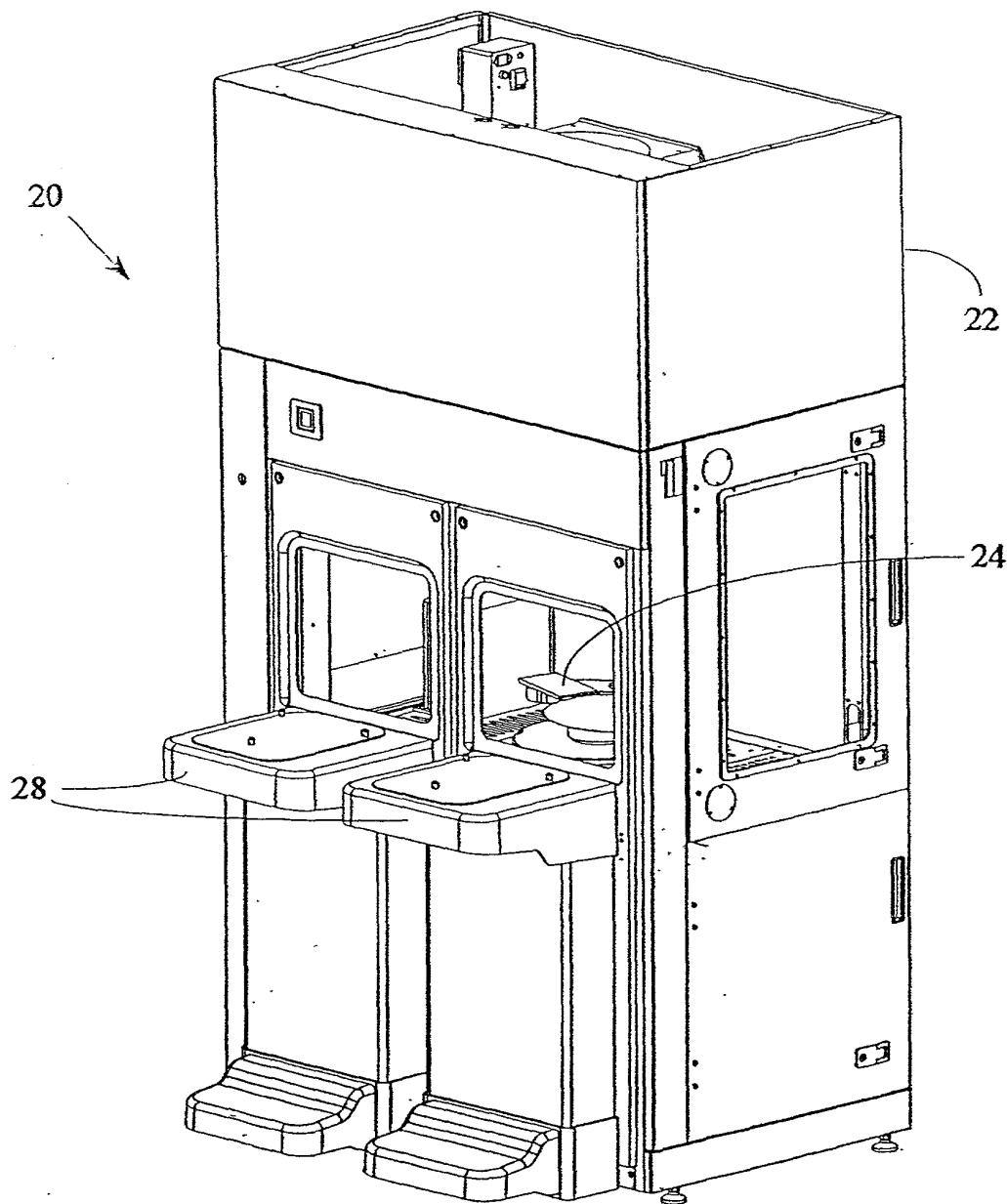
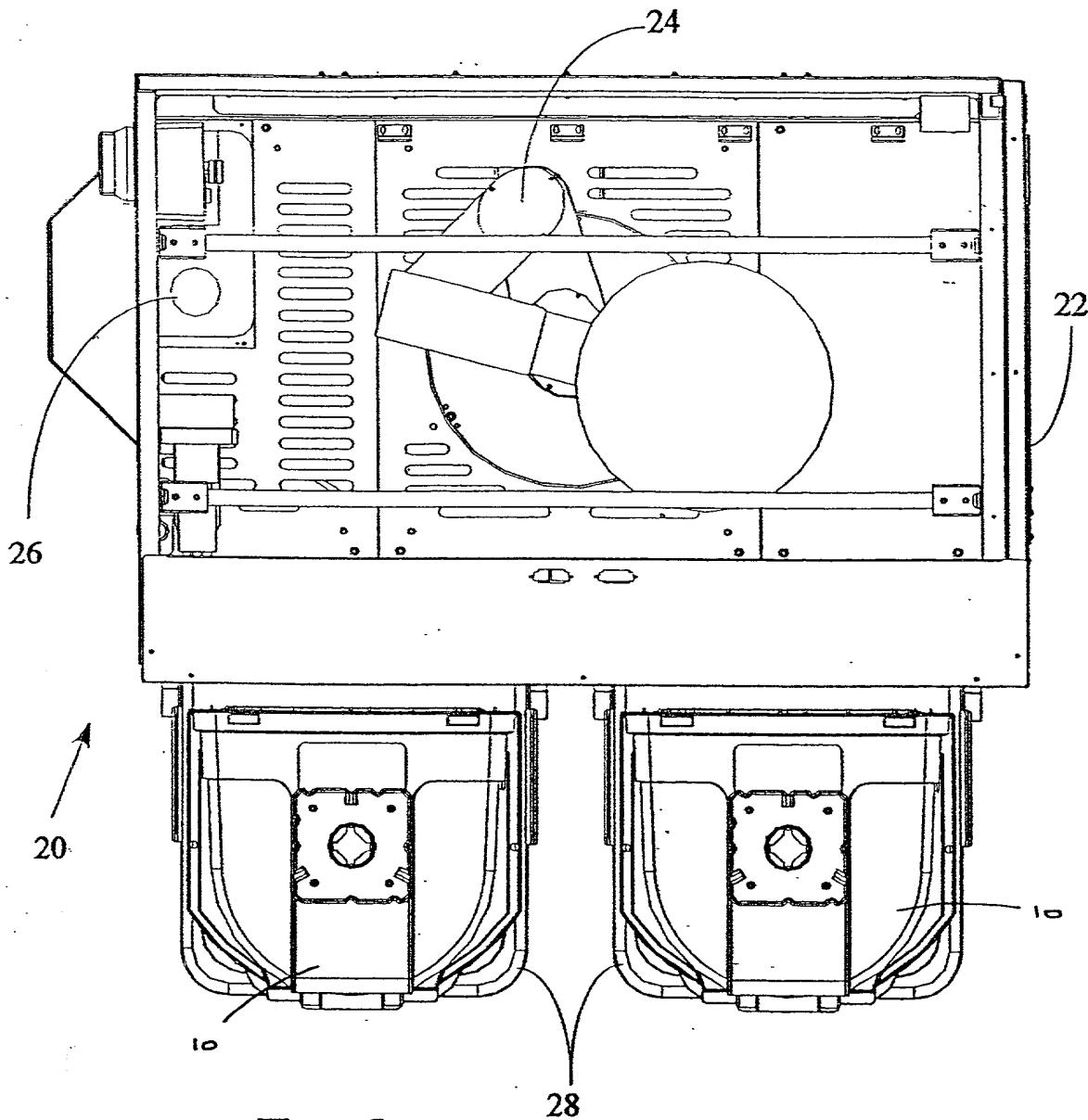


FIG. 1



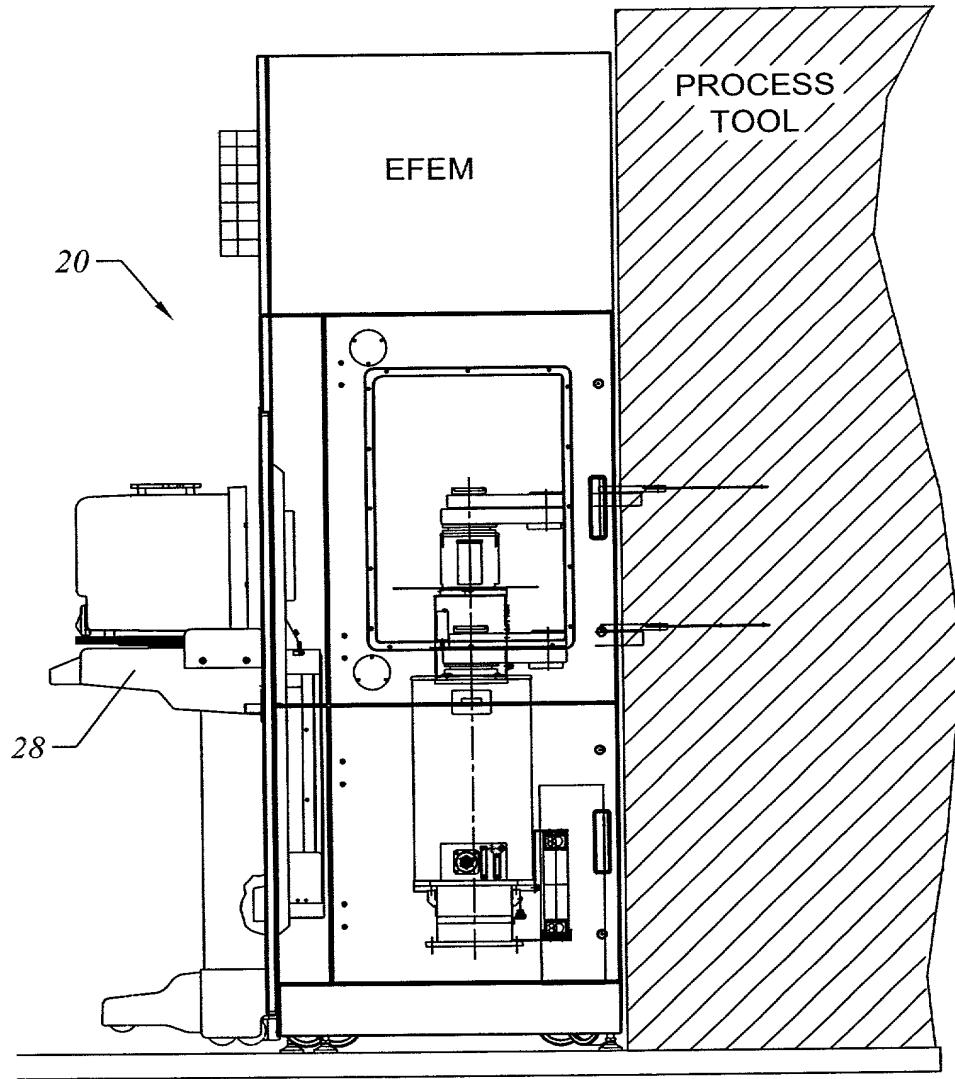


FIG. 3

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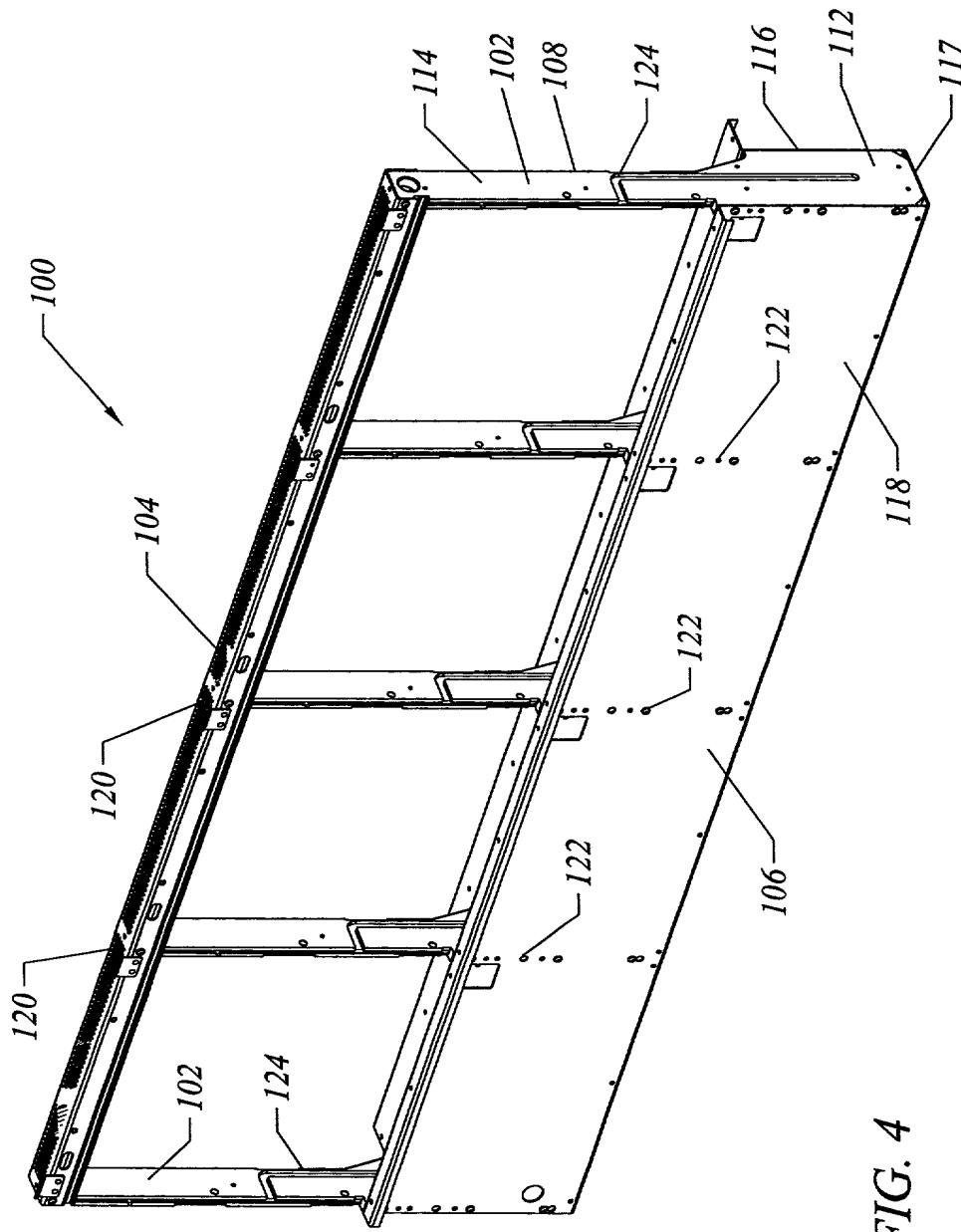
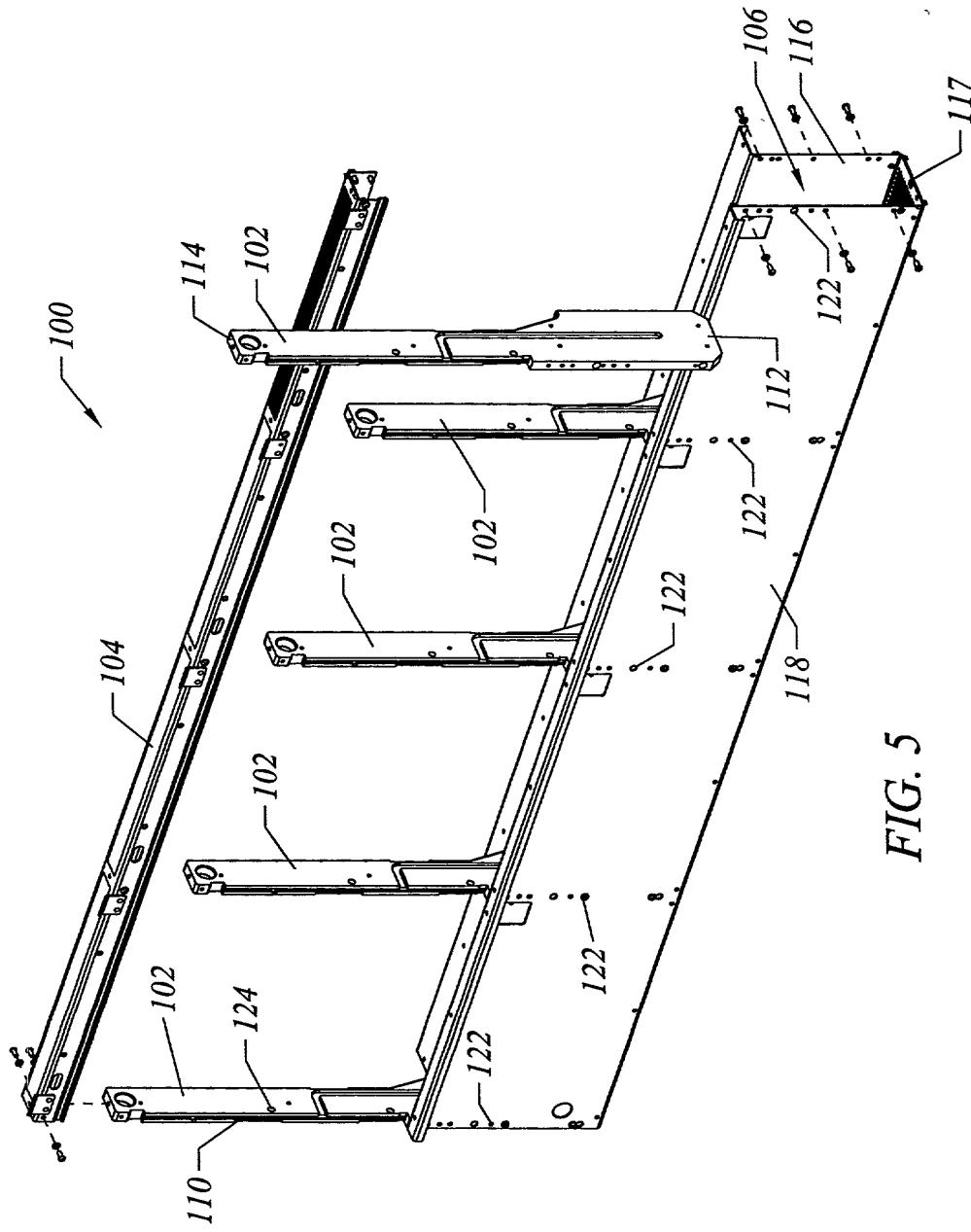


FIG. 4



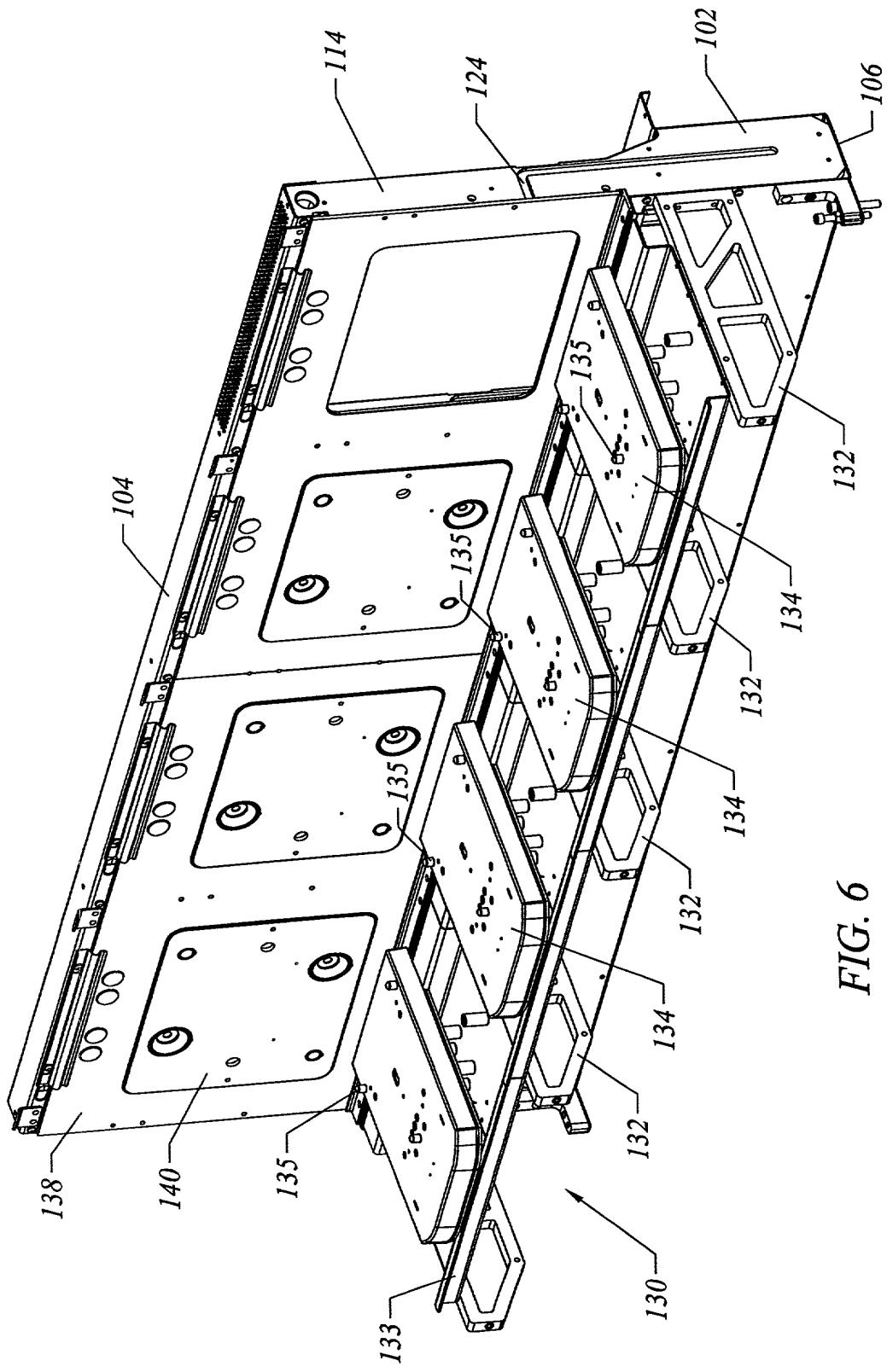


FIG. 6

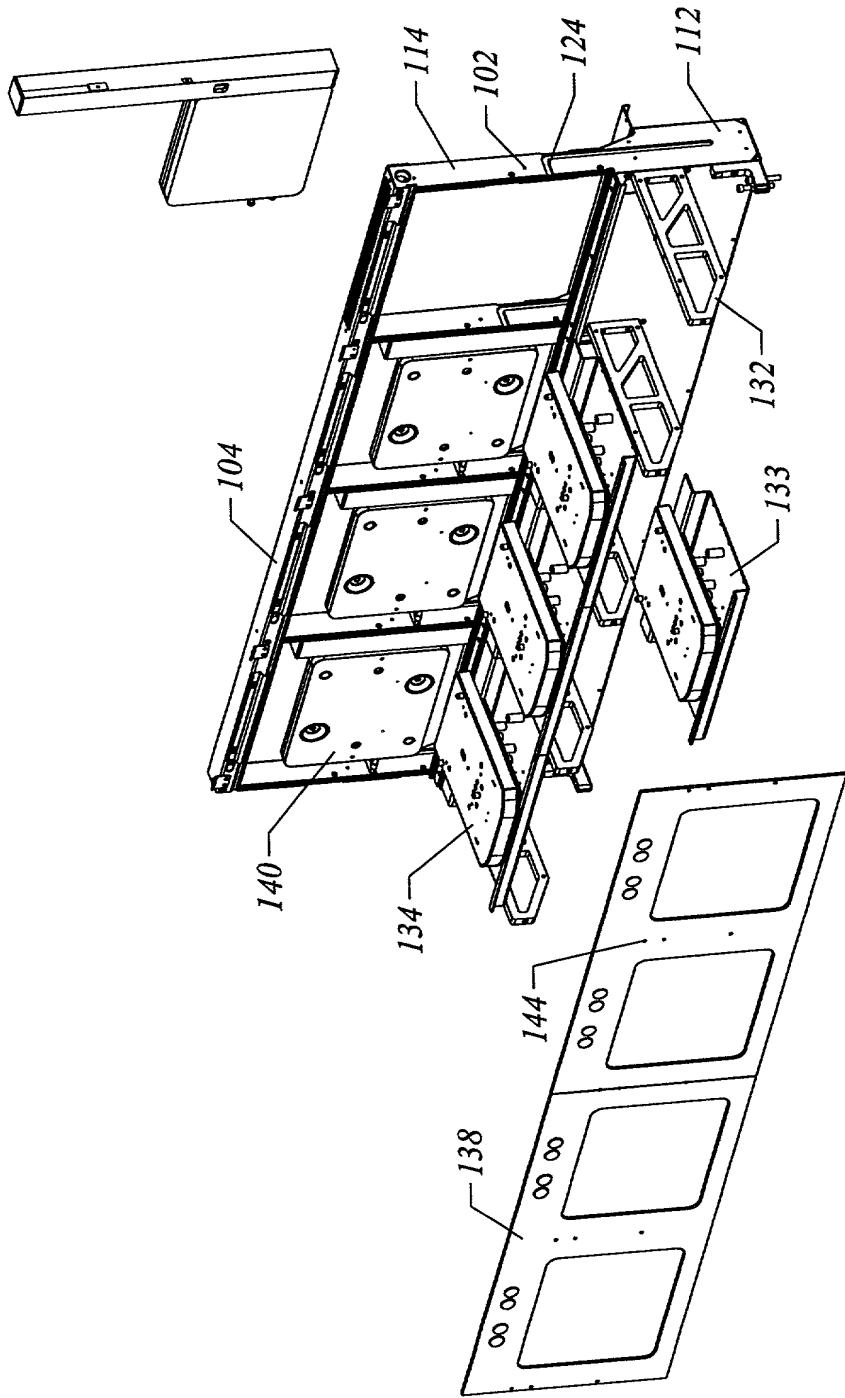


FIG. 7

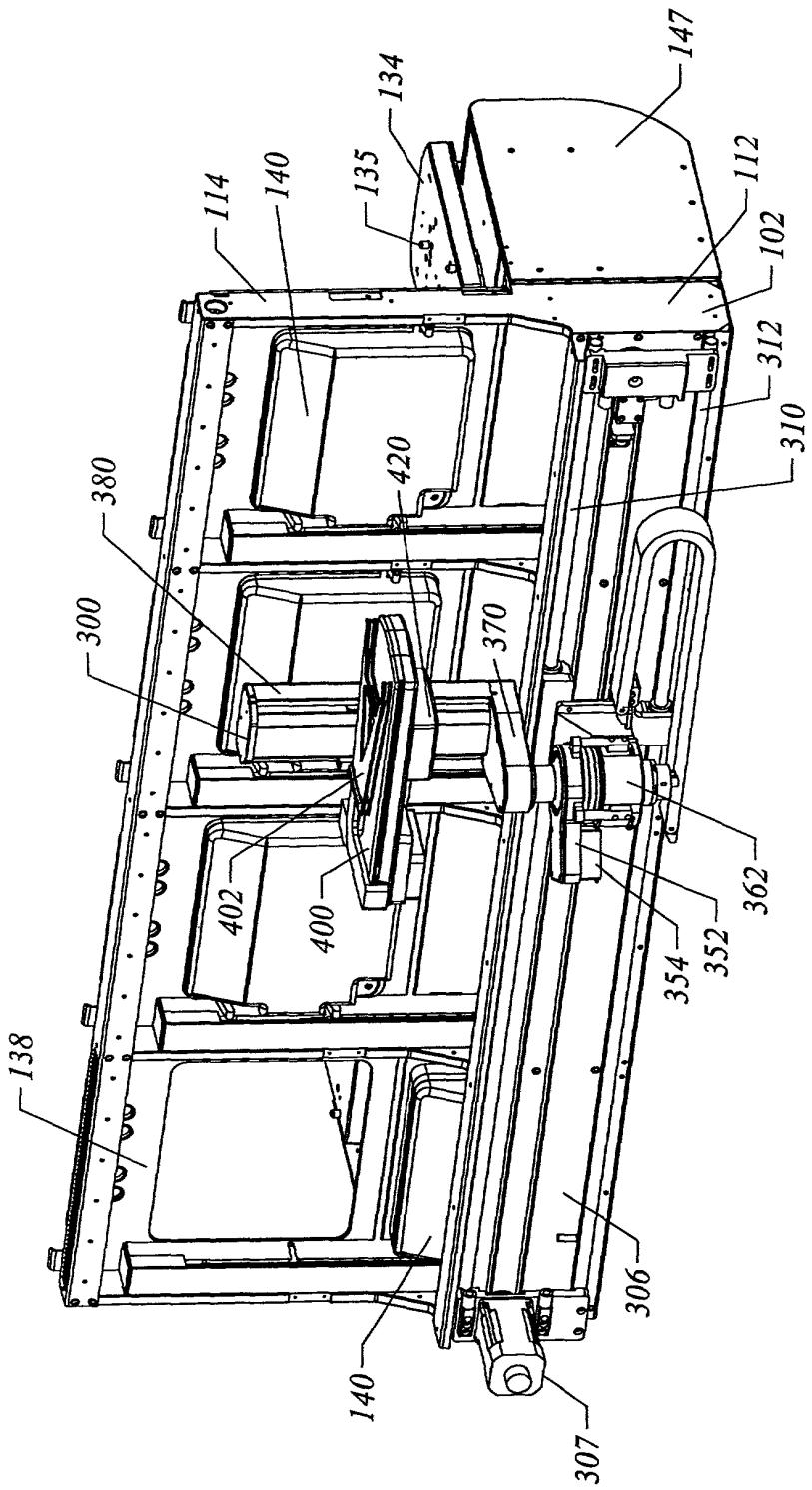


FIG. 8

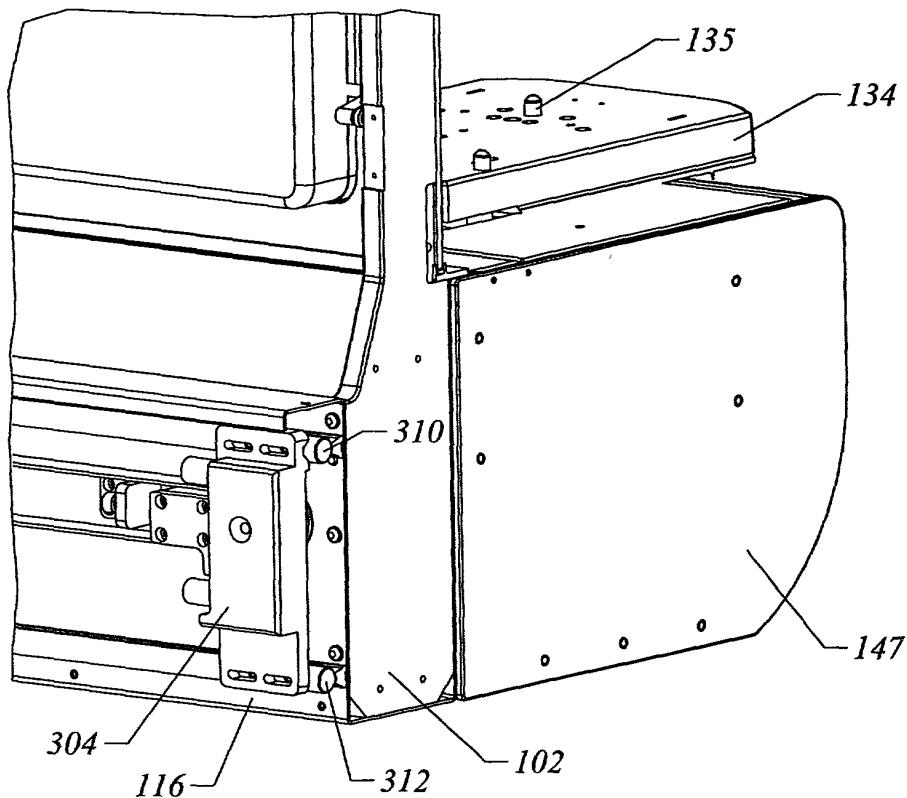


FIG. 9

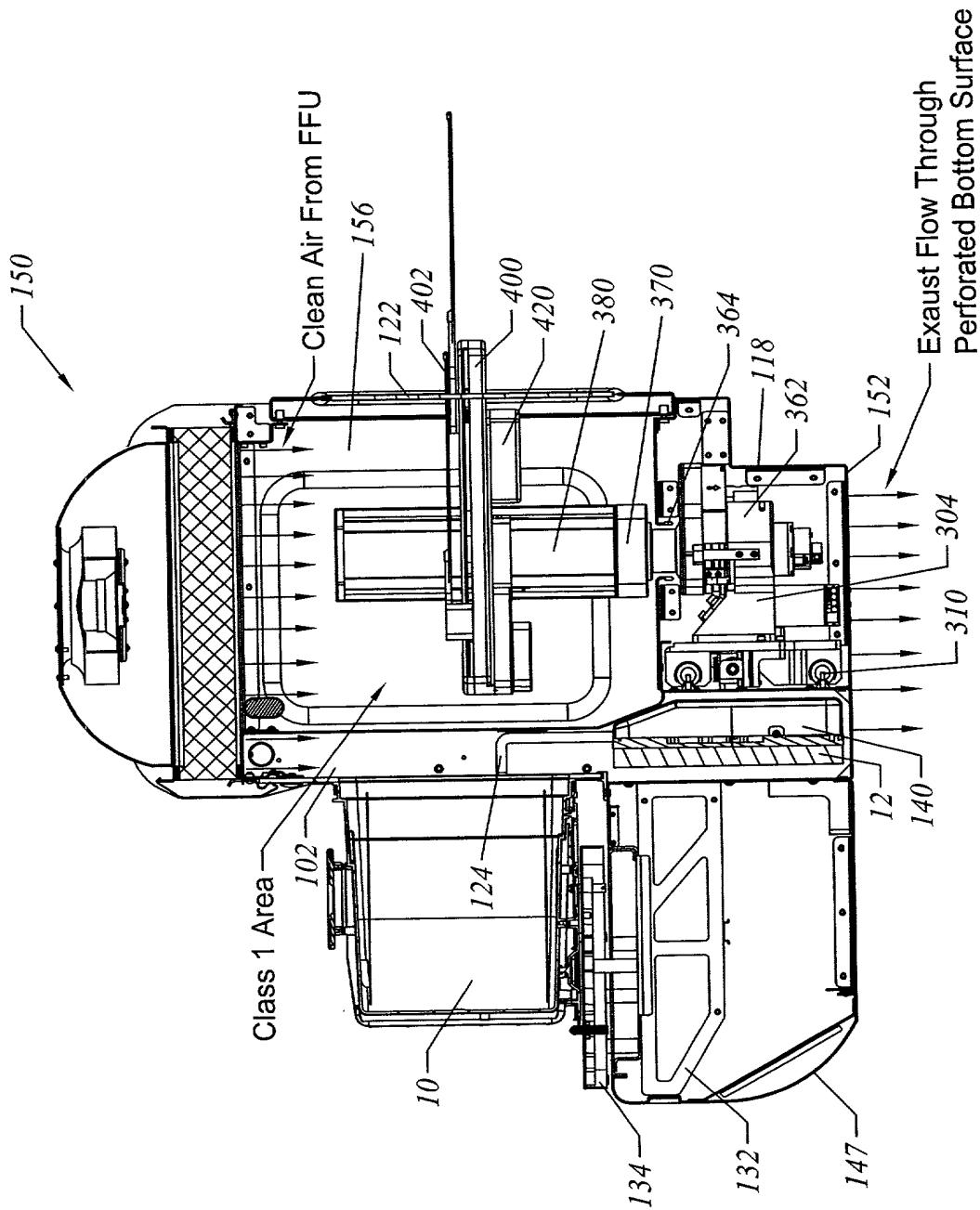
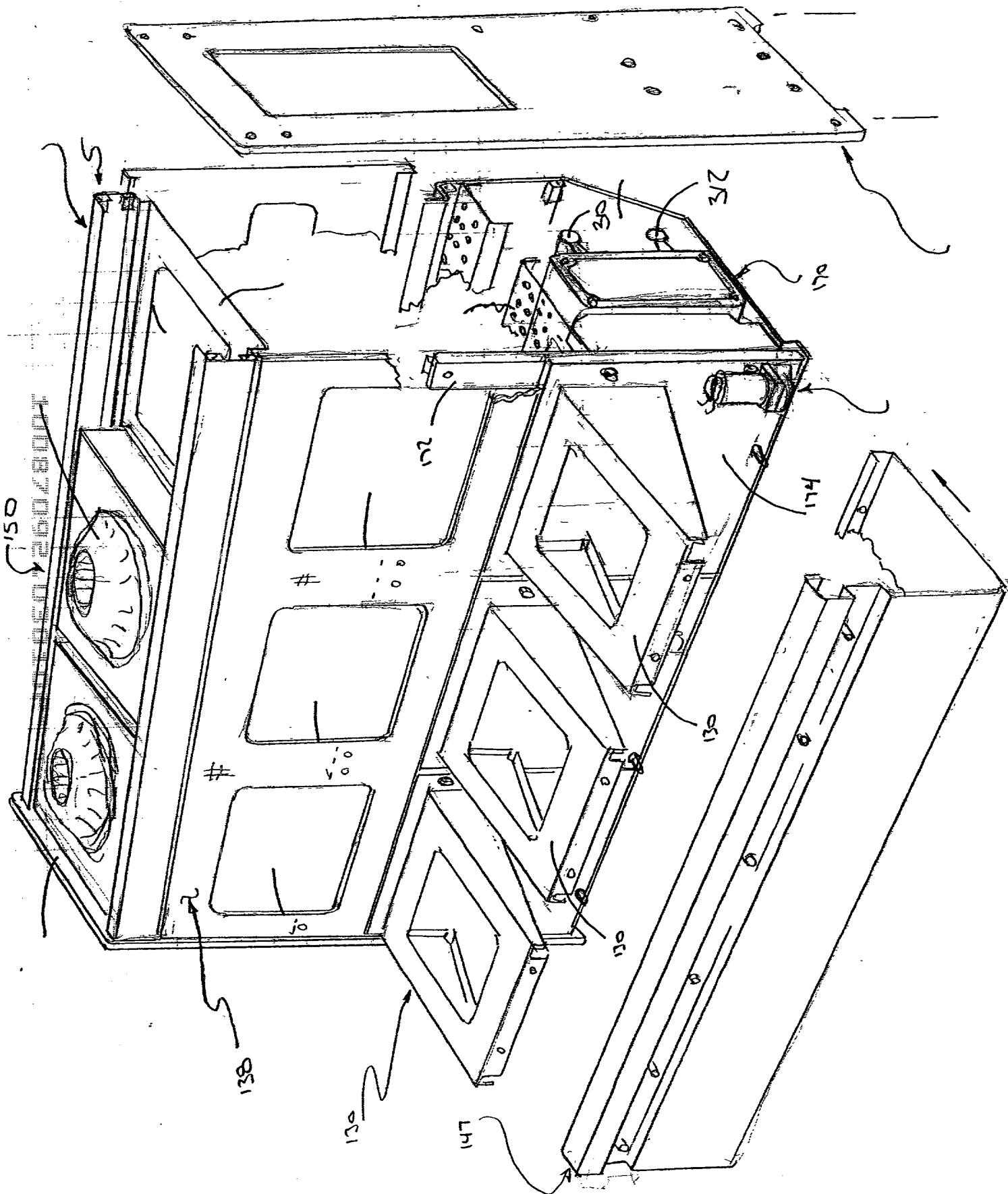


FIG. 10



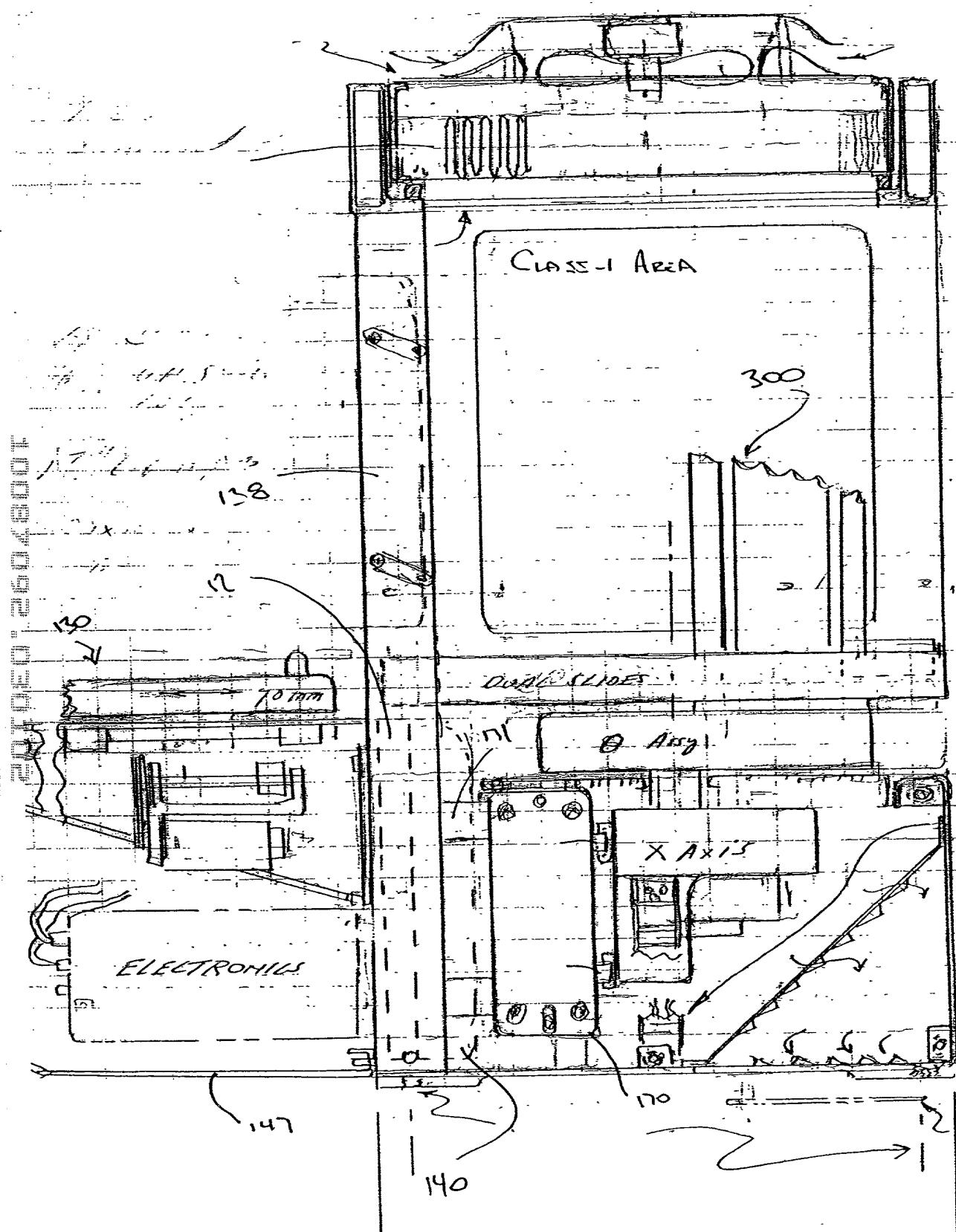


FIG. 12

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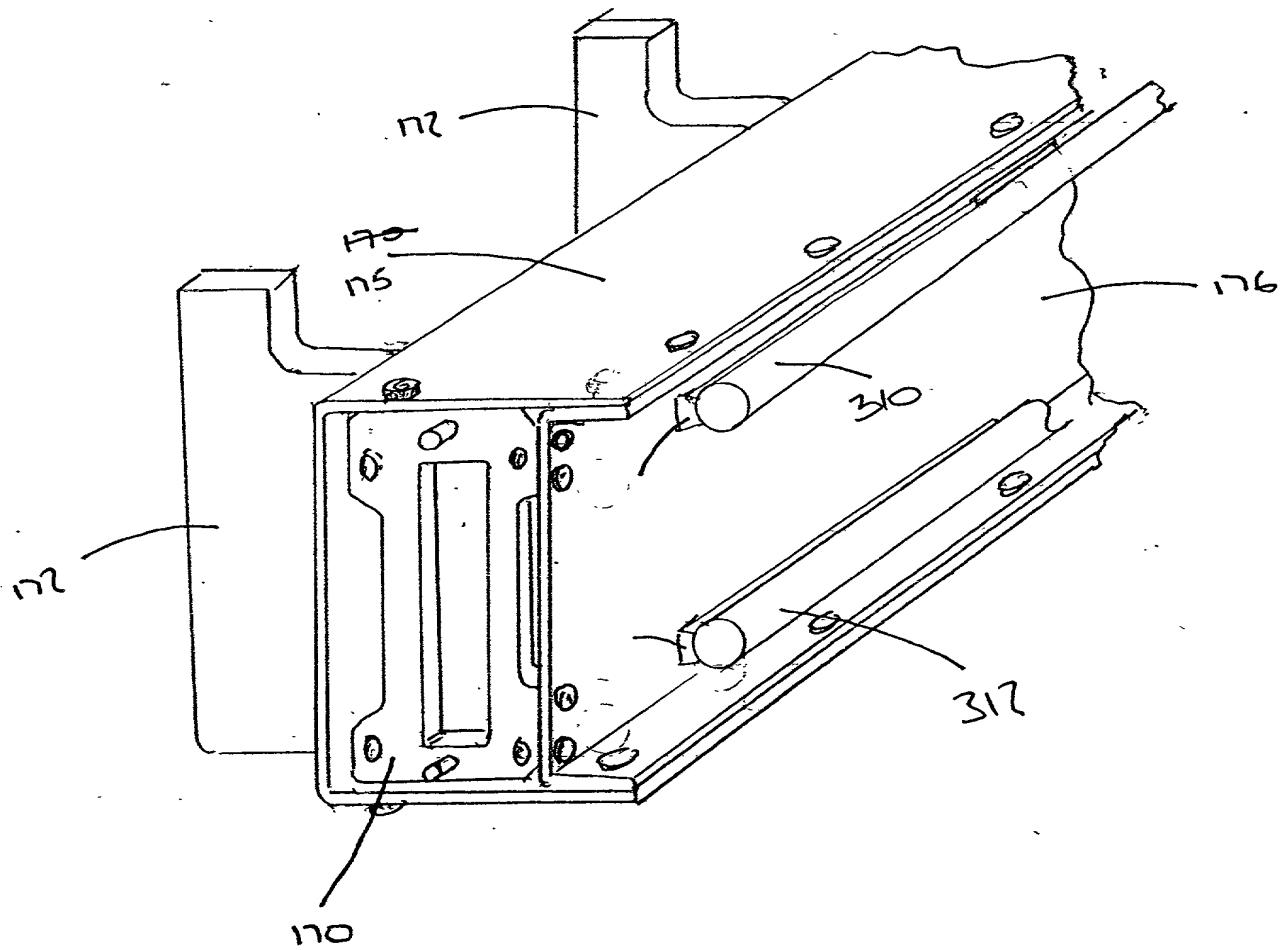


FIG. 13

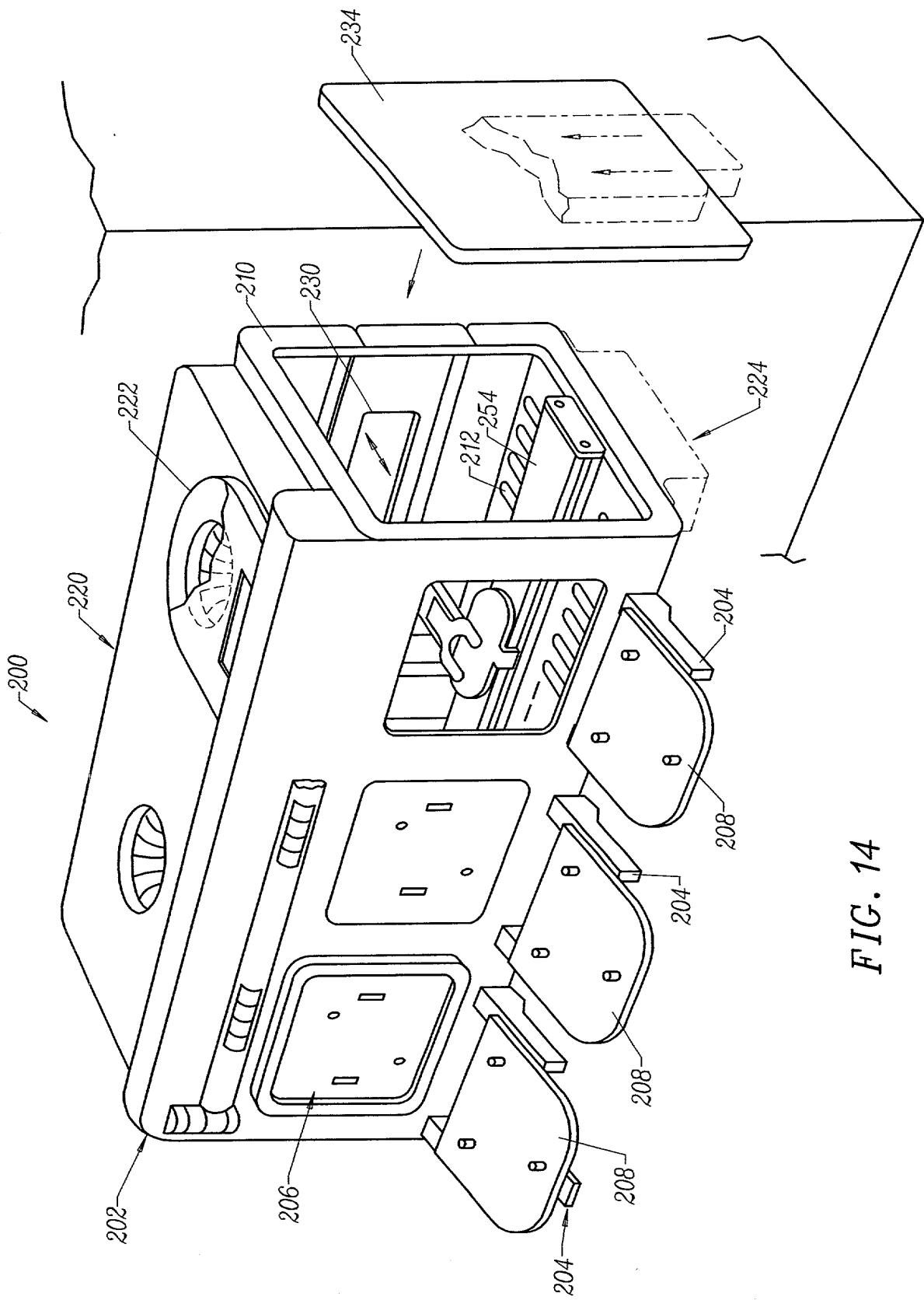


FIG. 14

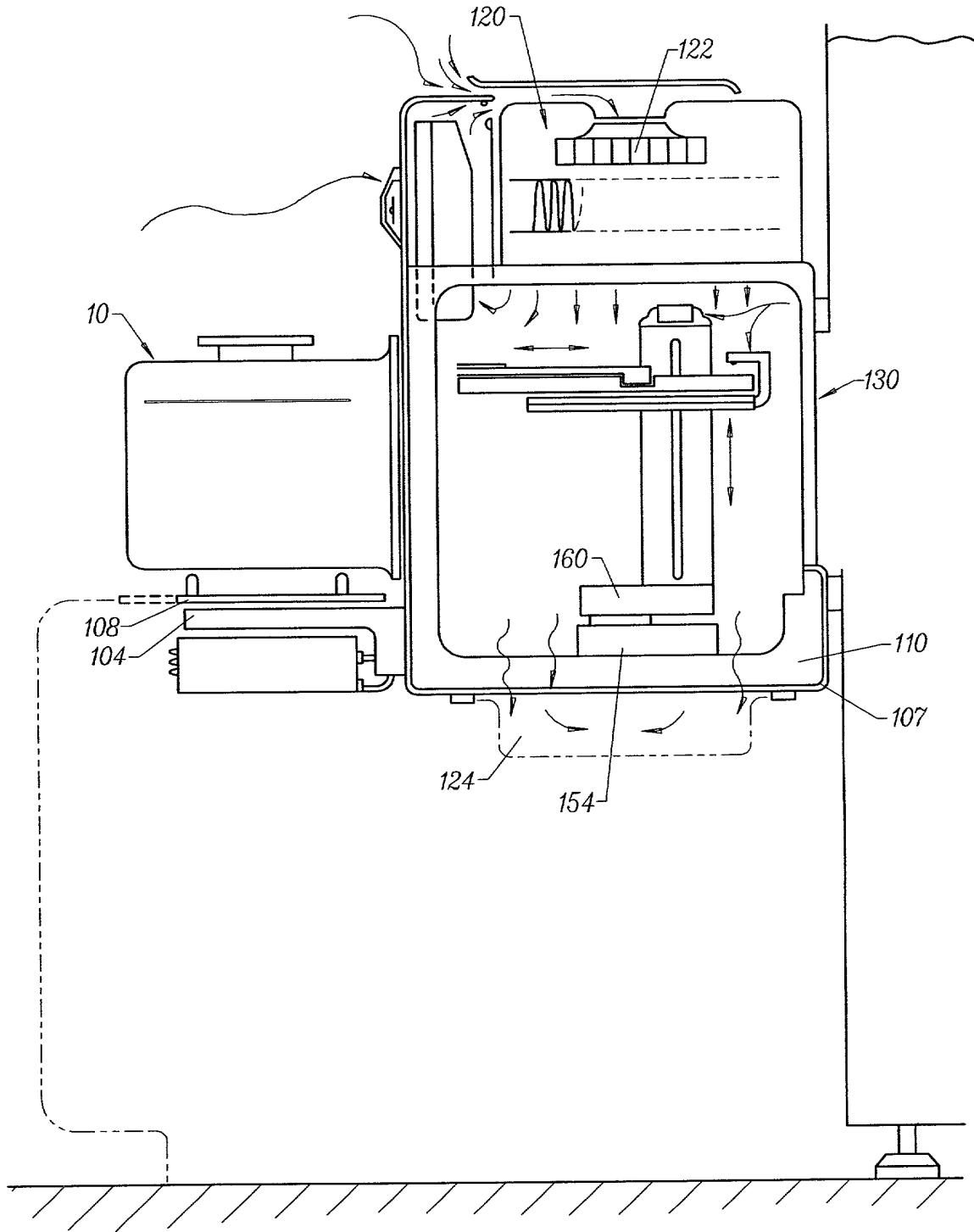


FIG. 15

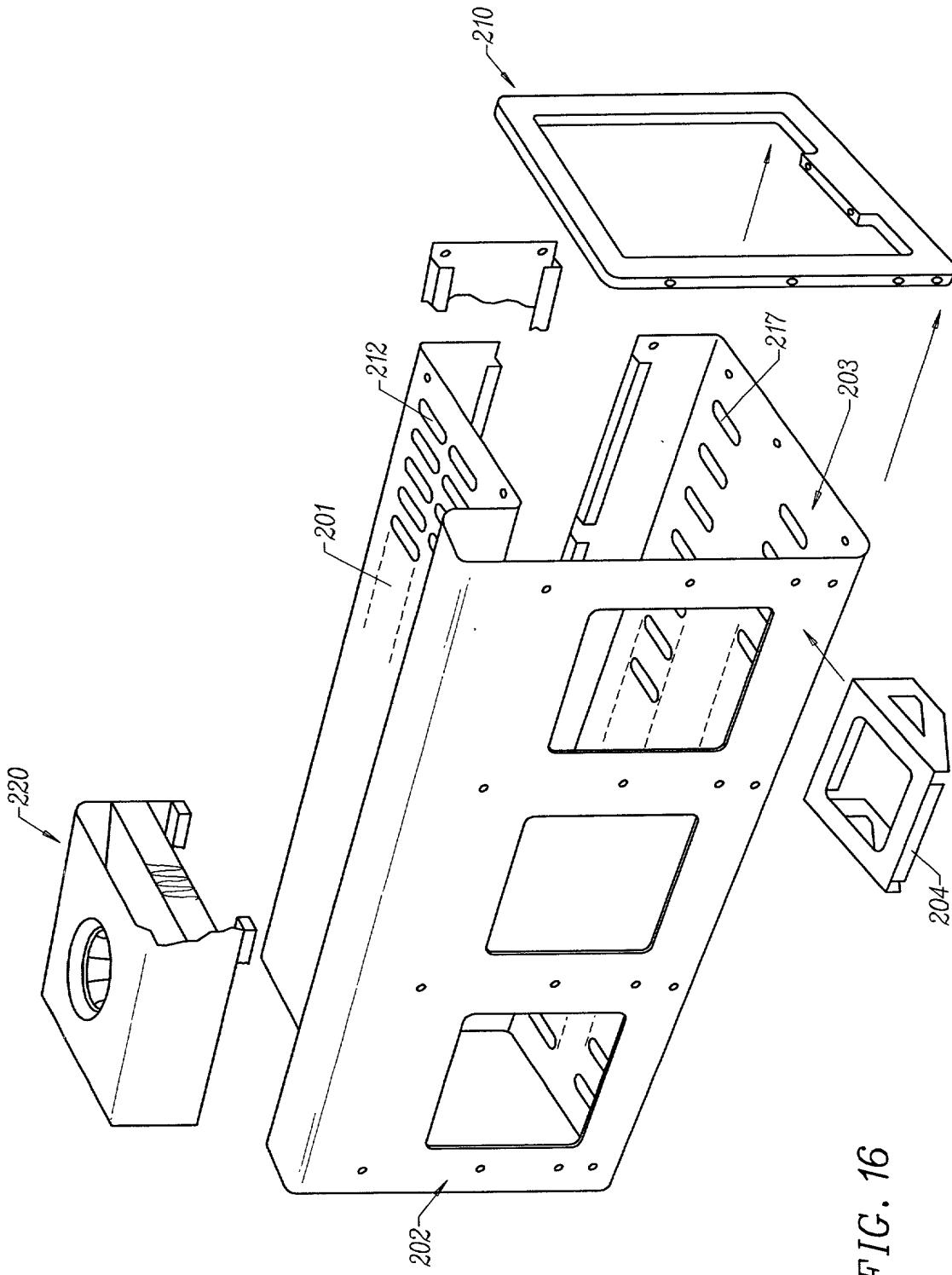


FIG. 16

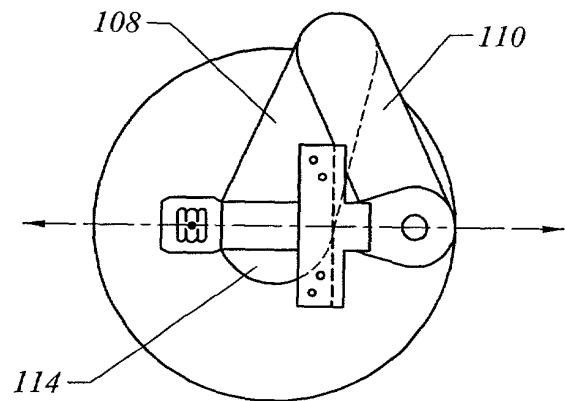


FIG. 17A
(*Prior Art*)

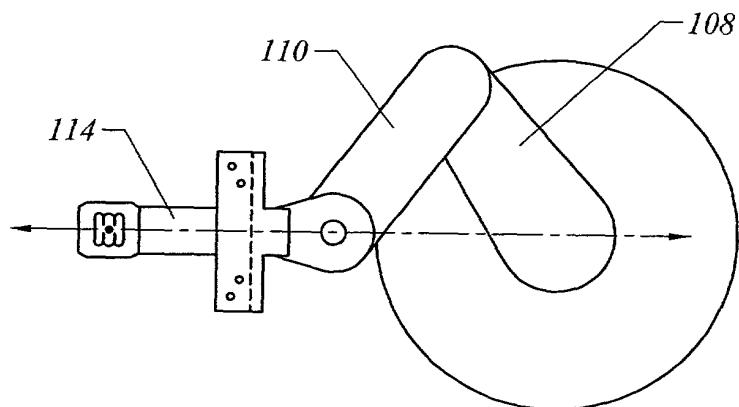


FIG. 17B
(*Prior Art*)

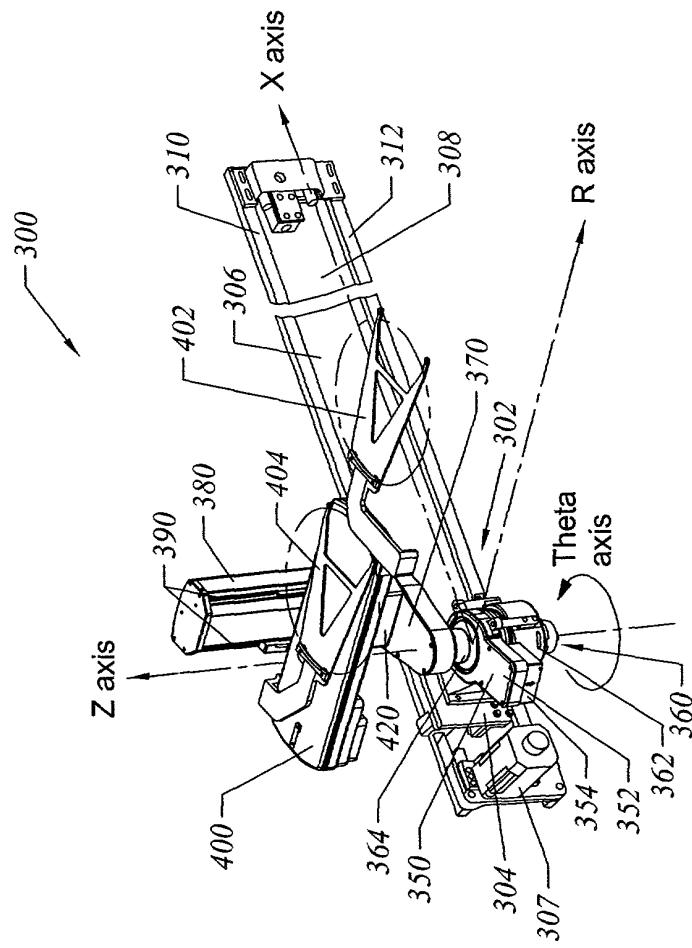


FIG. 18

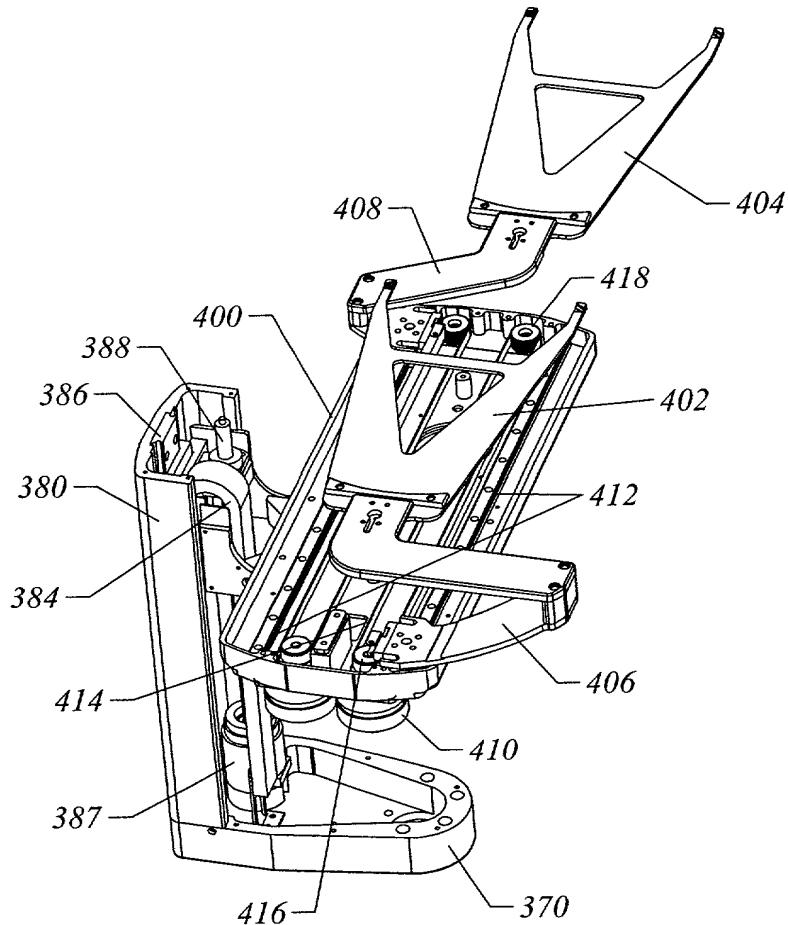


FIG. 19

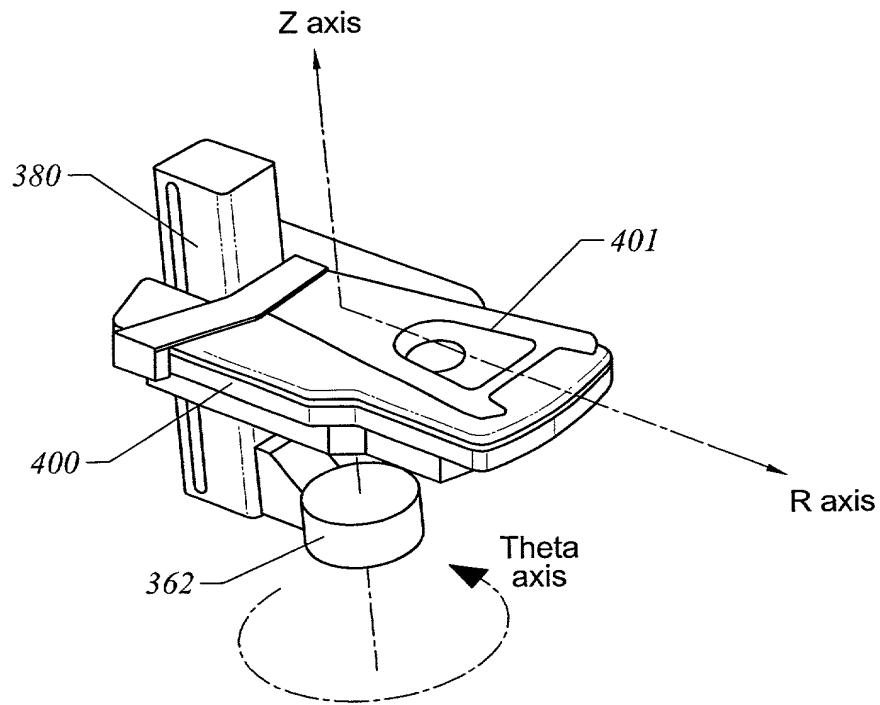


FIG. 20

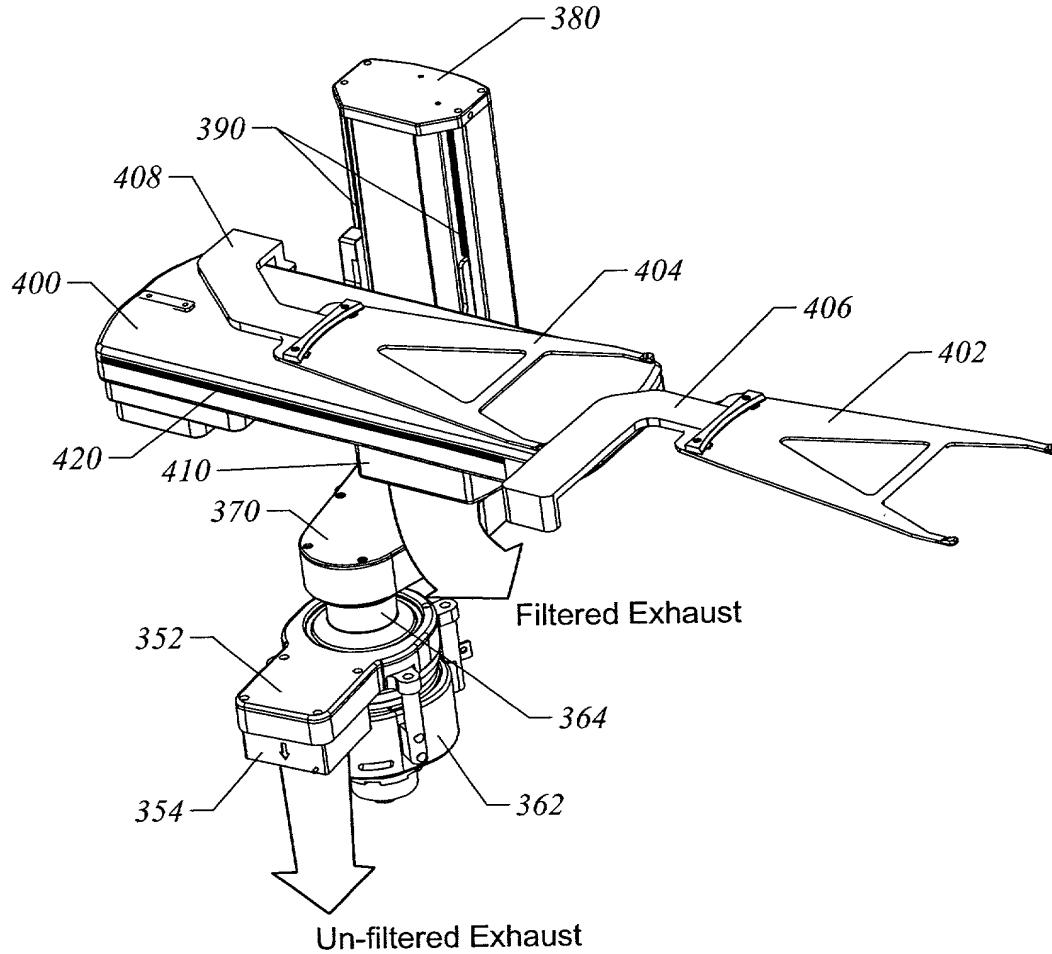


FIG. 21

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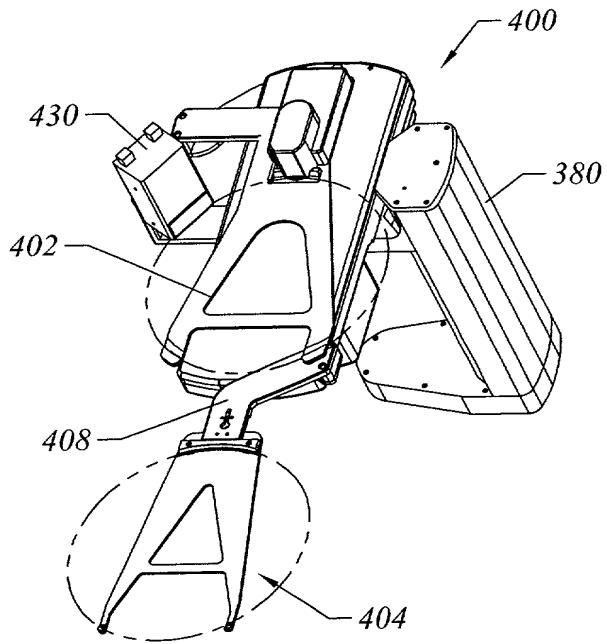


FIG. 22A

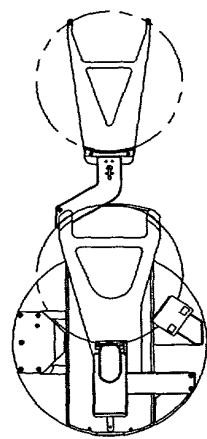


FIG. 22B

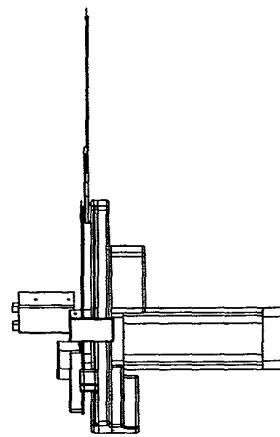


FIG. 22C

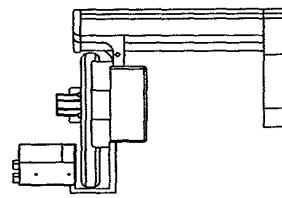


FIG. 22D

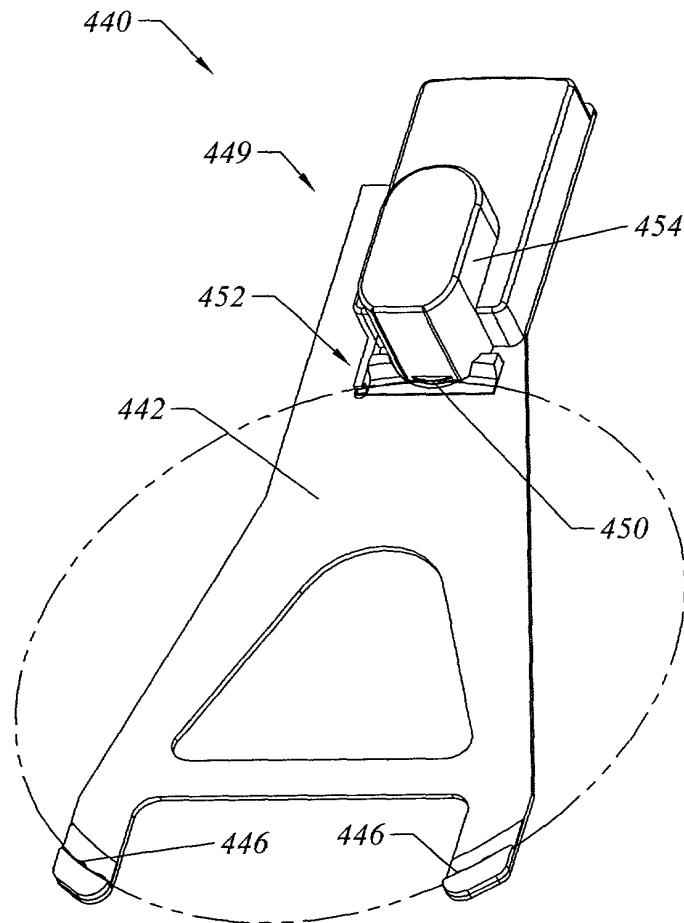


FIG. 23

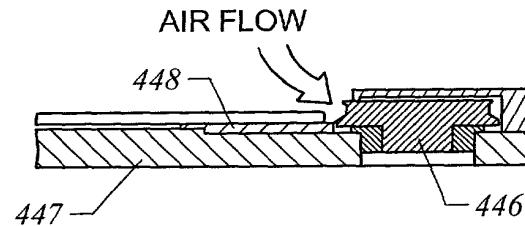


FIG. 24A

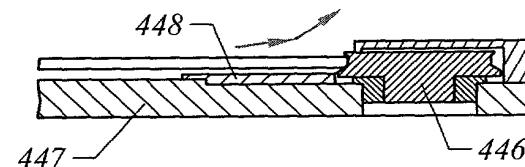


FIG. 24B

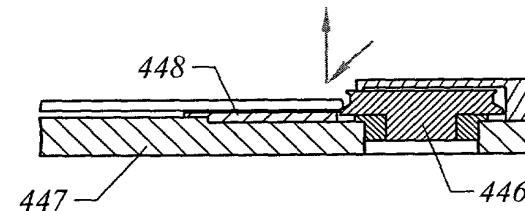


FIG. 24C

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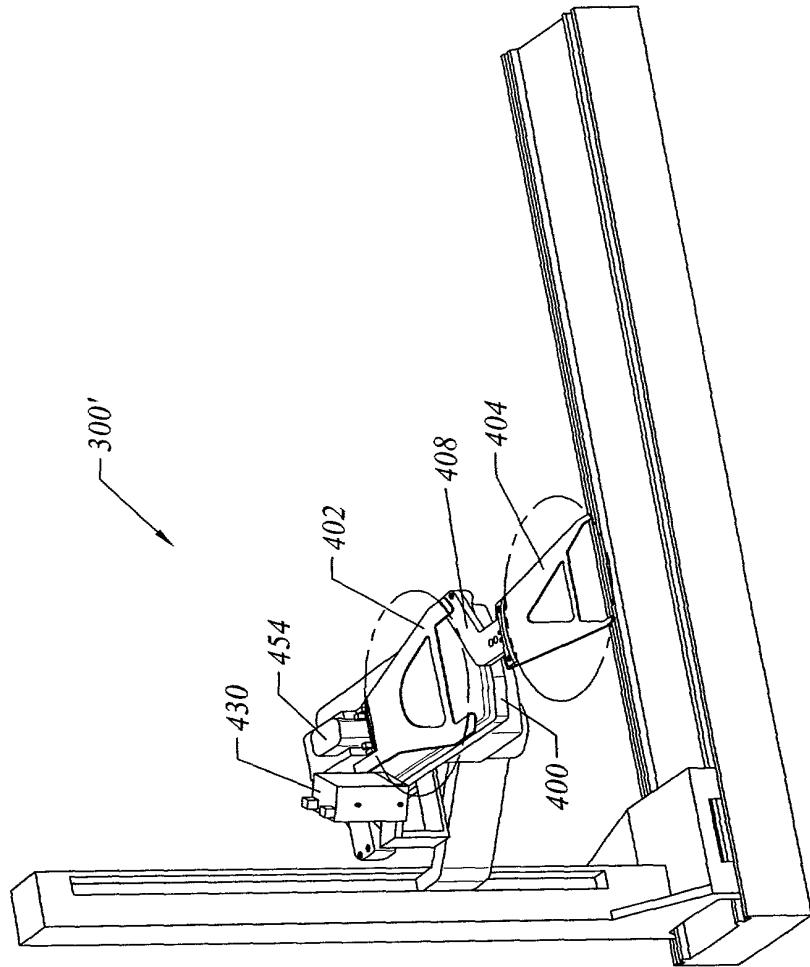


FIG. 25

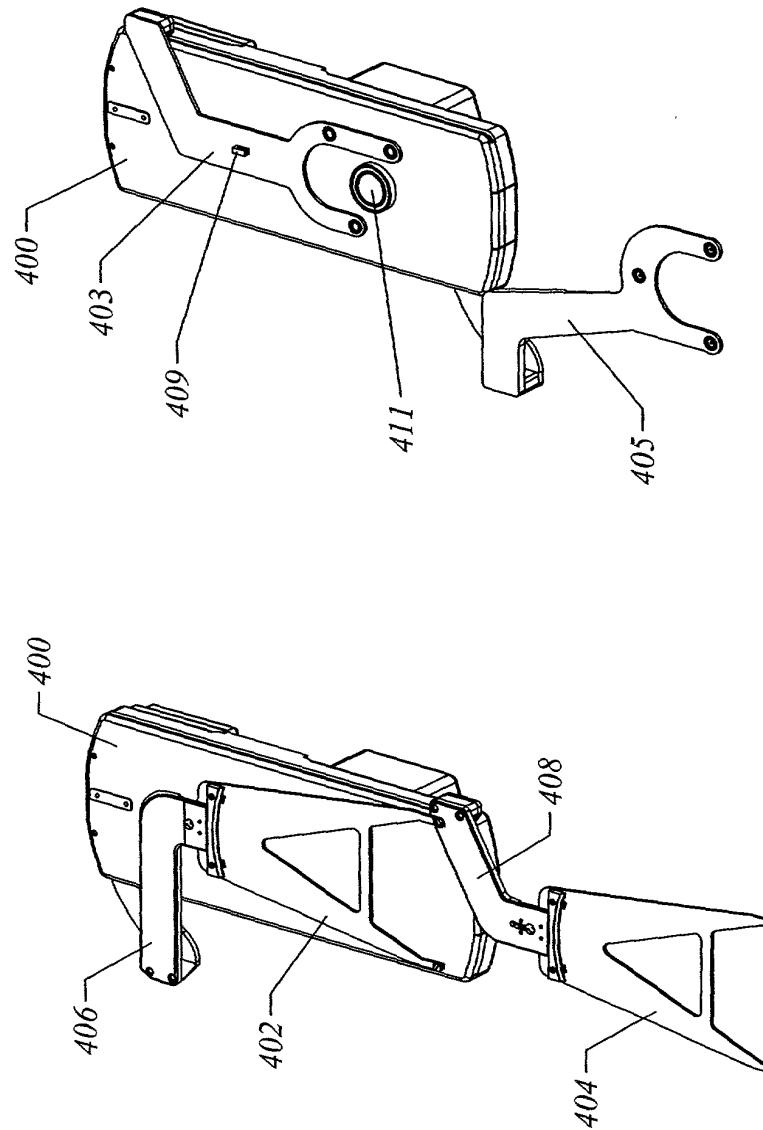
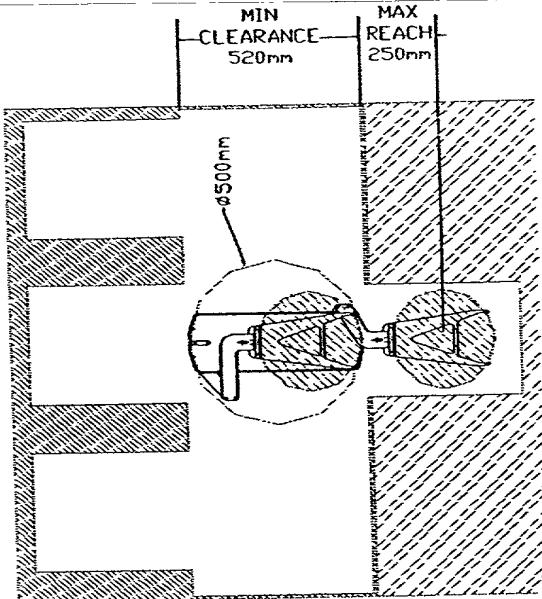


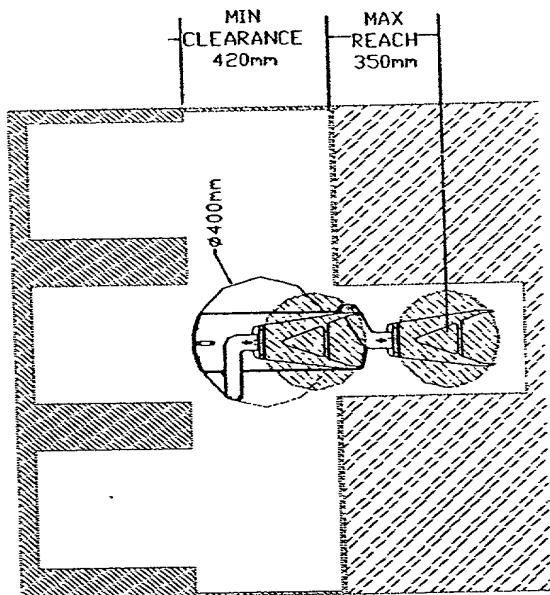
FIG. 26B

FIG. 26A

Conventional Linear Slide Robot



Off-Center Slide-Body (50mm offset)



EFEM Process Tool

FIG. 27A FIG. 27B

Example motion sequence for rapid swap slide-body with off center rotation axis.

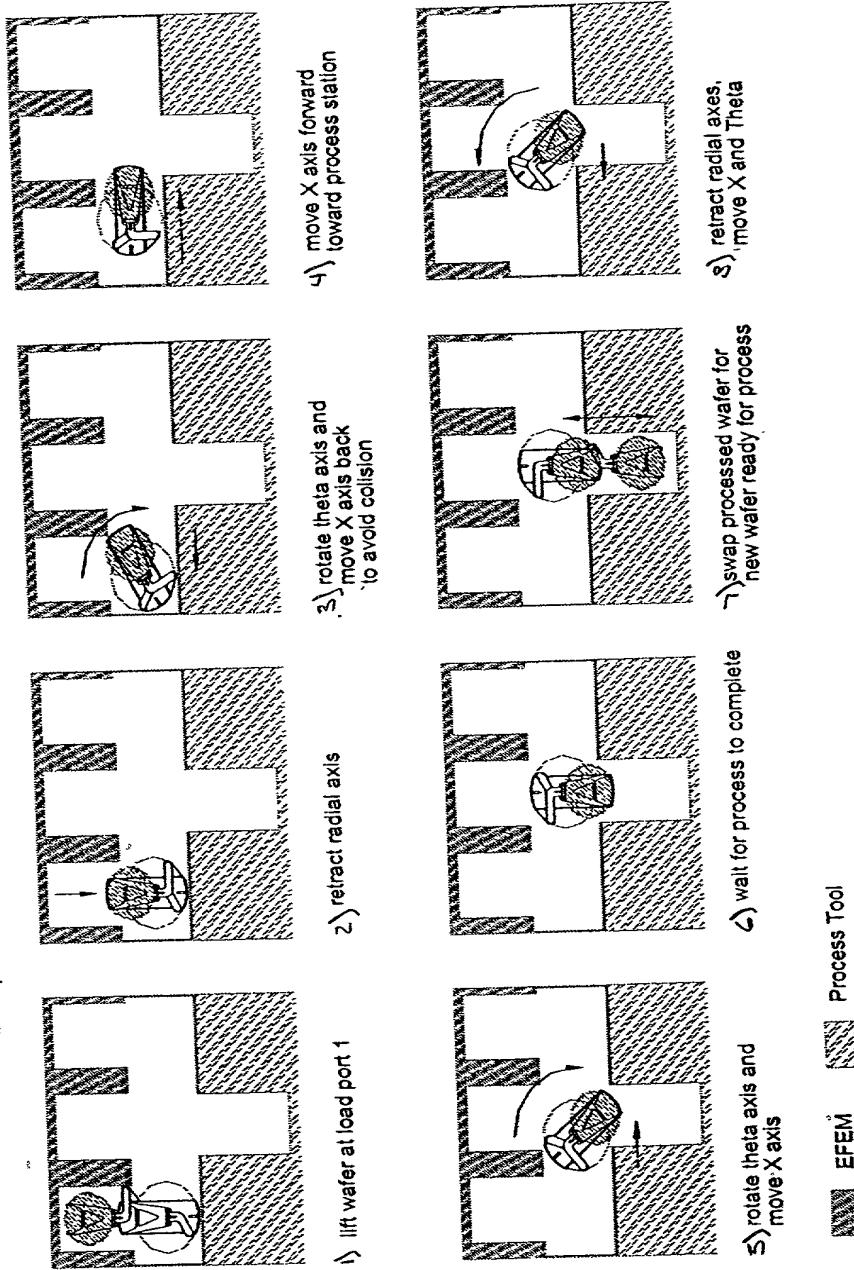


FIG. 28

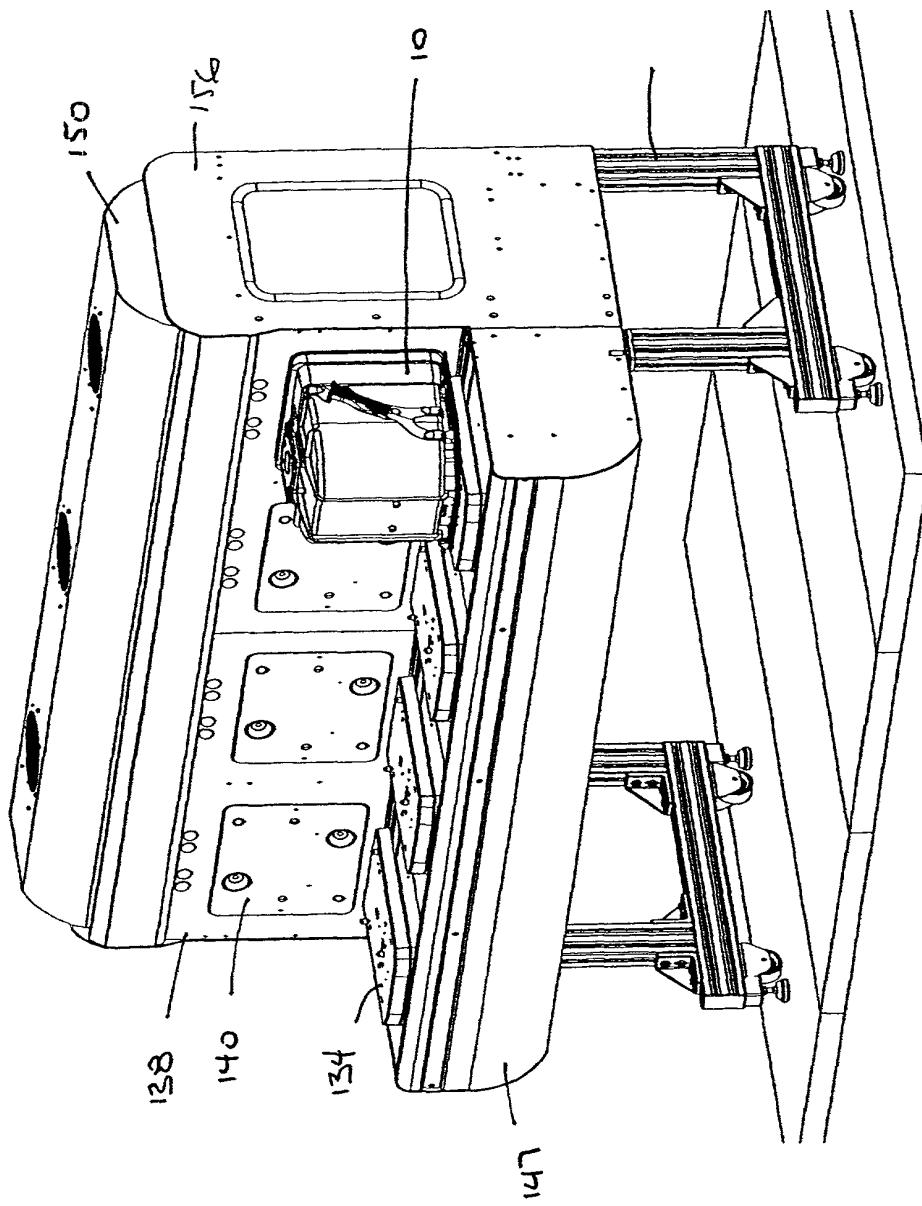
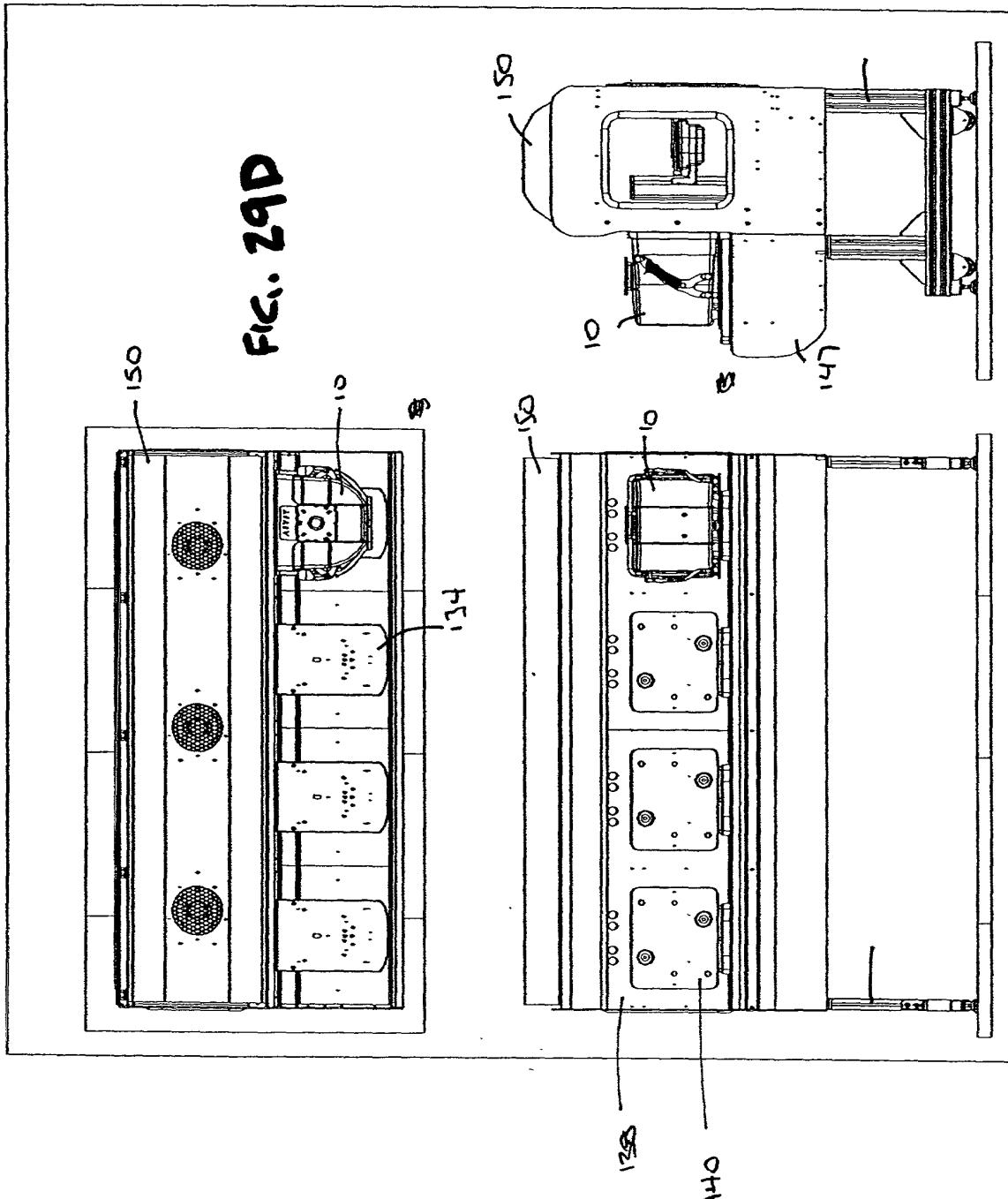


Fig. 29A



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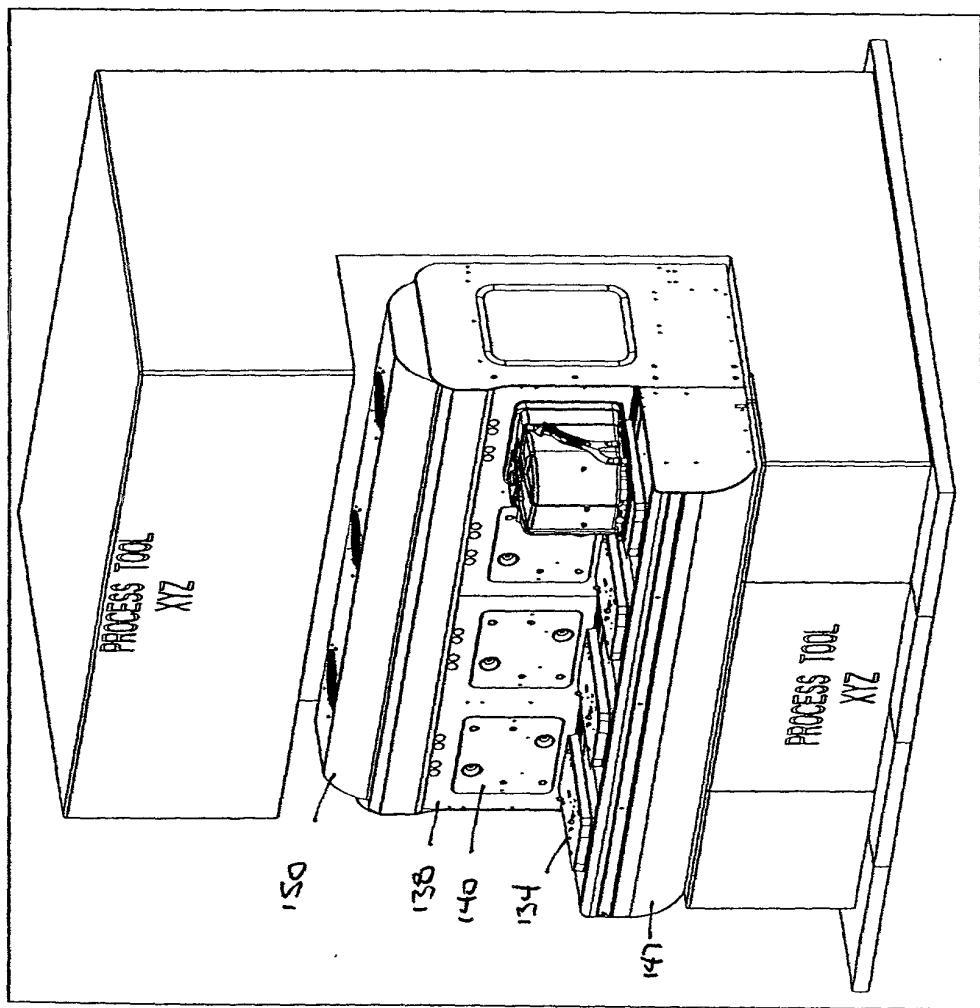


Fig. 30A

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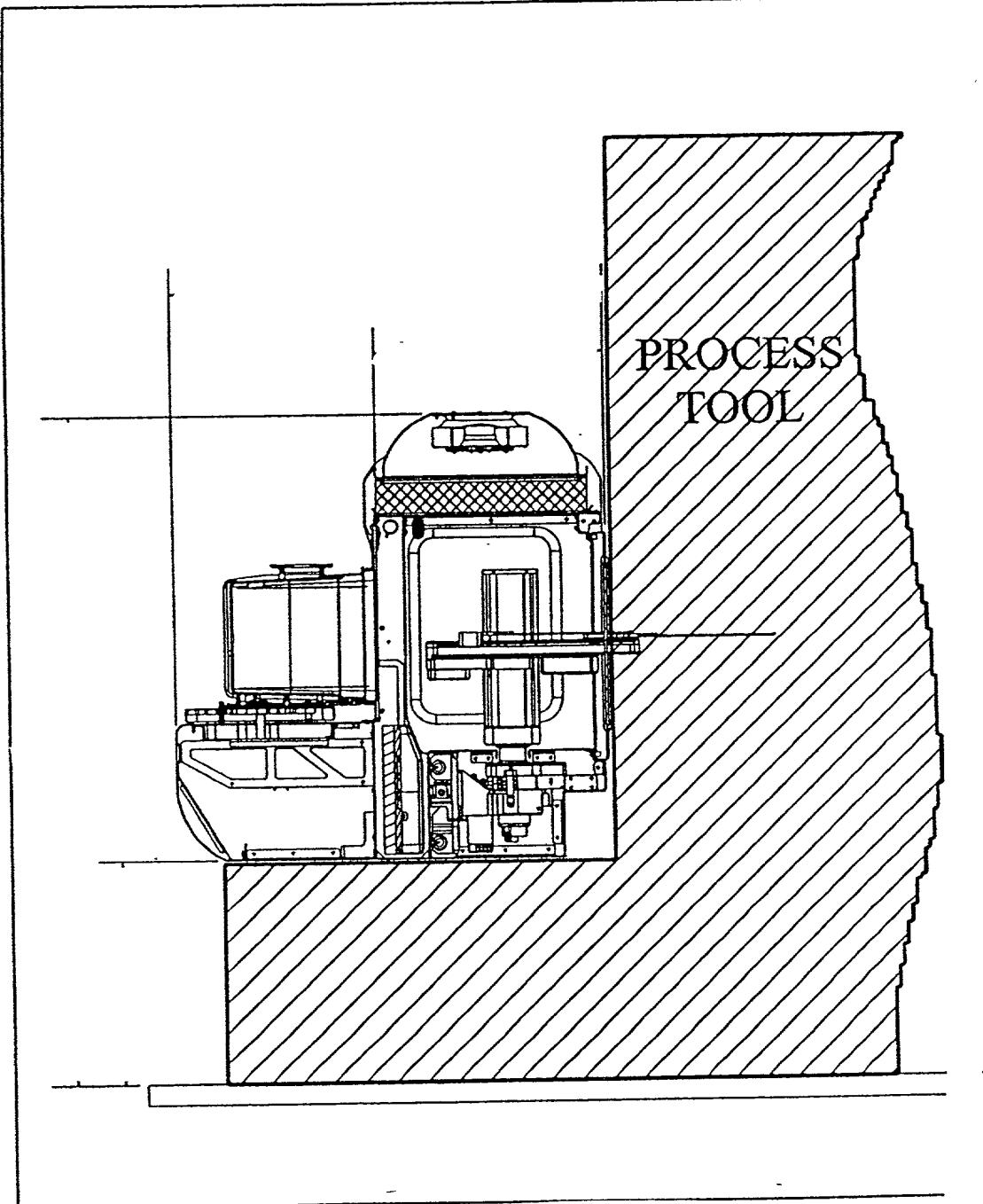


FIG. 30B

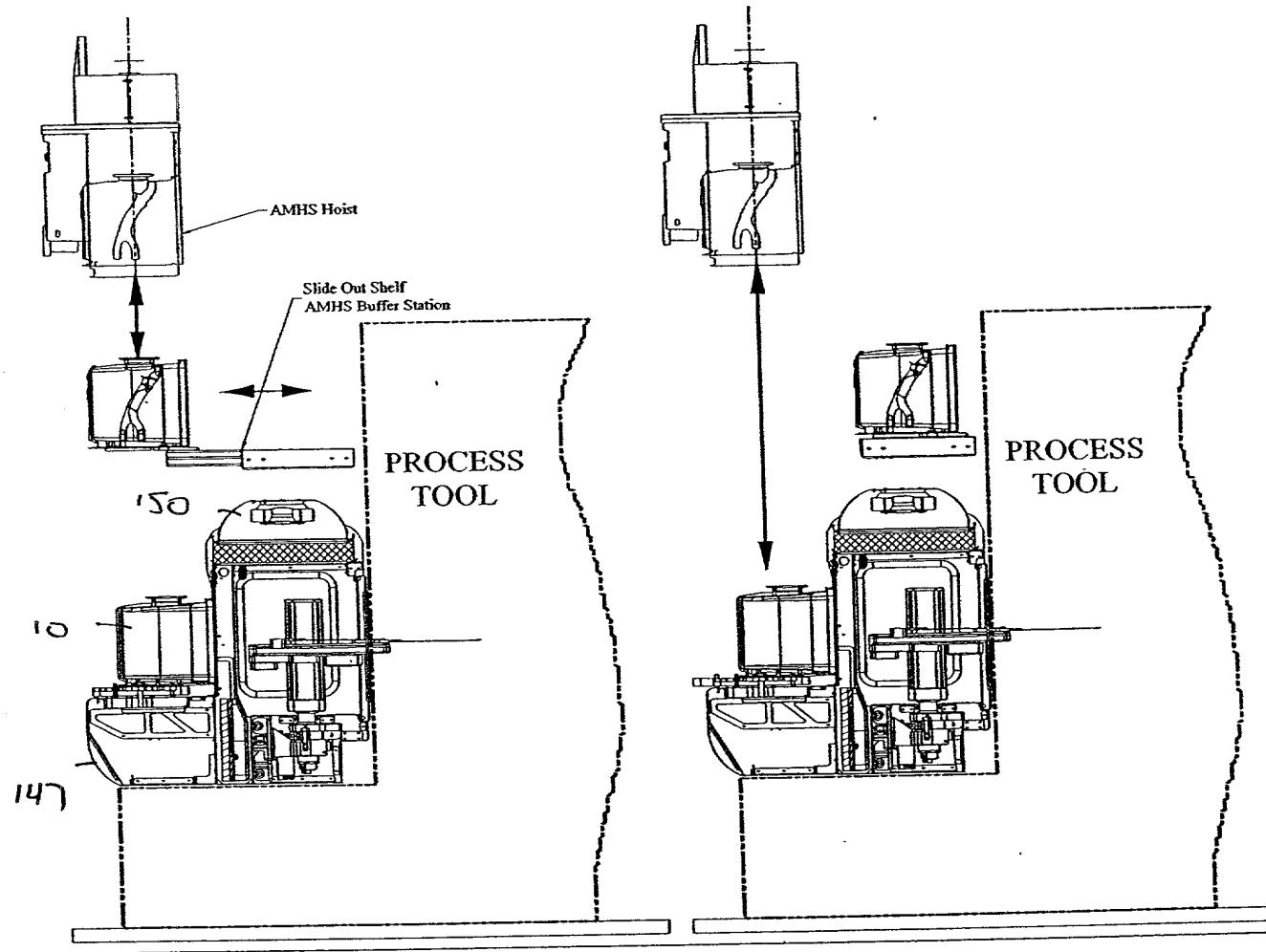


FIG. 31